## **Appendix B Methodology and Data Limitations**

## General Approach

This appendix briefly summarizes the methodology used in this study to estimate the quantity of California-generated waste tires flowing to each market segment.

In short, the methodology involves:

- Gathering data and information through direct surveys and interviews of California-based waste tire processors, balers, landfills disposing waste tires or using TDA or ADC, cement kilns consuming TDF, retreaders, TDP manufacturers/installers/marketers, and select haulers;
- Compiling and analyzing CalRecycle data such as data on tire flows as reported by haulers and facilities in Comprehensive Trip Logs and entered into the Waste Tire Manifest System; the Disposal Reporting System; facility permitting activity; and grant program data available through CalRecycle monthly meeting agendas;
- Reviewing third-party information sources such as Caltrans' annual report to
  the Legislature on waste tire use; California Air Resources Board data on
  cement kiln tire use; the Rubber Manufacturers Association data on national
  scrap tire market trends; and a variety of other information sources identified
  each year, including information from other trade associations such as the
  Rubber Pavement Association and the Synthetic Turf Council; and
- Interviewing a variety of other individuals knowledgeable about waste tire industry and market trends.

Detailed data on flows of California tires from these sources is entered into a master flow model and scrutinized in an effort to identify all flows as completely and accurately as possible while avoiding double counting. This is an iterative process in which researchers frequently identify issues and follow up with facilities to refine the analysis.

For most market segments, survey responses are the preferred source, subject to validation if possible from other sources. If survey responses are not available for a given facility, analysts select the alternative approach deemed to be the most accurate, usually prior survey responses or WTMS data, which may be refined based on all available data and information.

Estimating the quantity of used tires is particularly challenging, as some facilities and haulers can only provide a rough estimate of the percentage of tires culled from waste tire streams they manage. These percentages can vary widely depending on the type of waste tire generators served, the extent to which tires may be culled prior to reaching the processor, proximity to ports, and general economic conditions. As a result, a